

FIG. 1 is a perspective view of a device 10. The device 10 includes a substrate 12 having a top surface 14 and a bottom surface 16. A source beam 18 is directed at the top surface 14. The source beam 18 is reflected by the top surface 14 and is directed towards a detector 20. The detector 20 is positioned to receive the reflected source beam 18. The device 10 is configured to measure the reflectivity of the top surface 14.

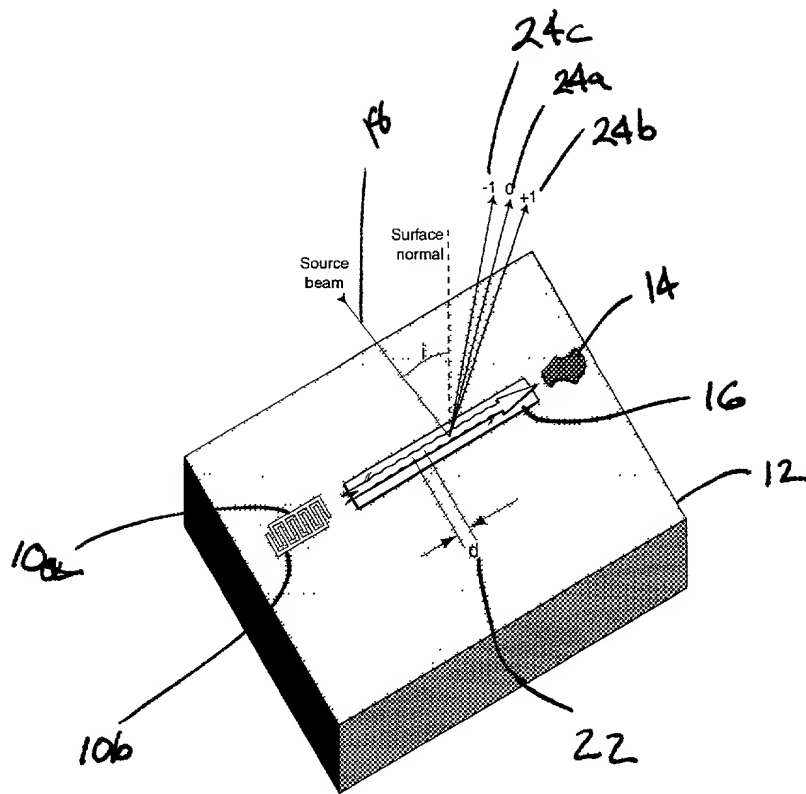


FIG 1

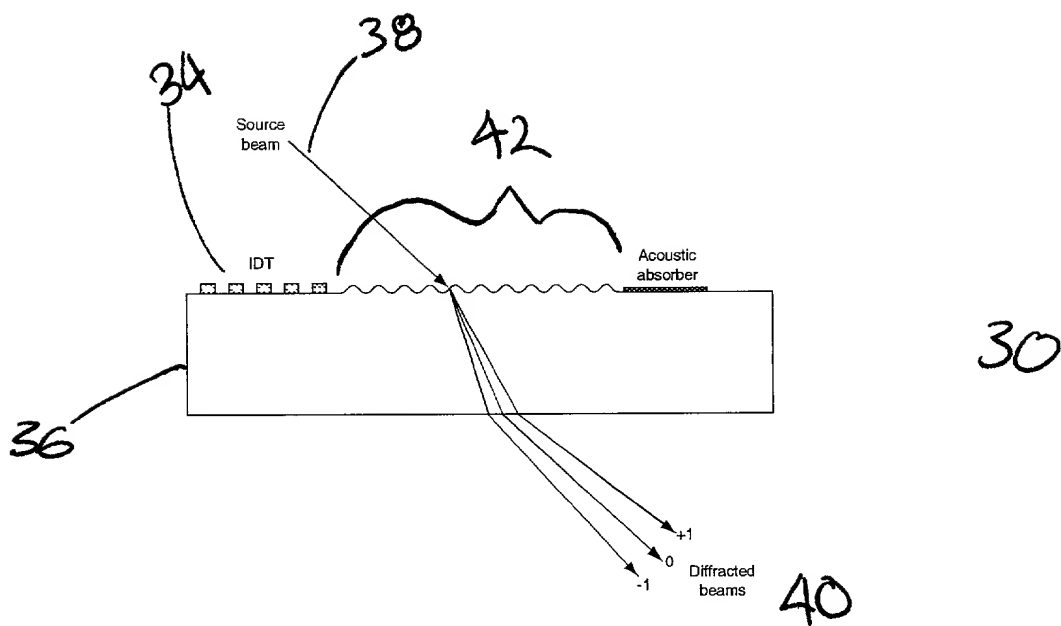
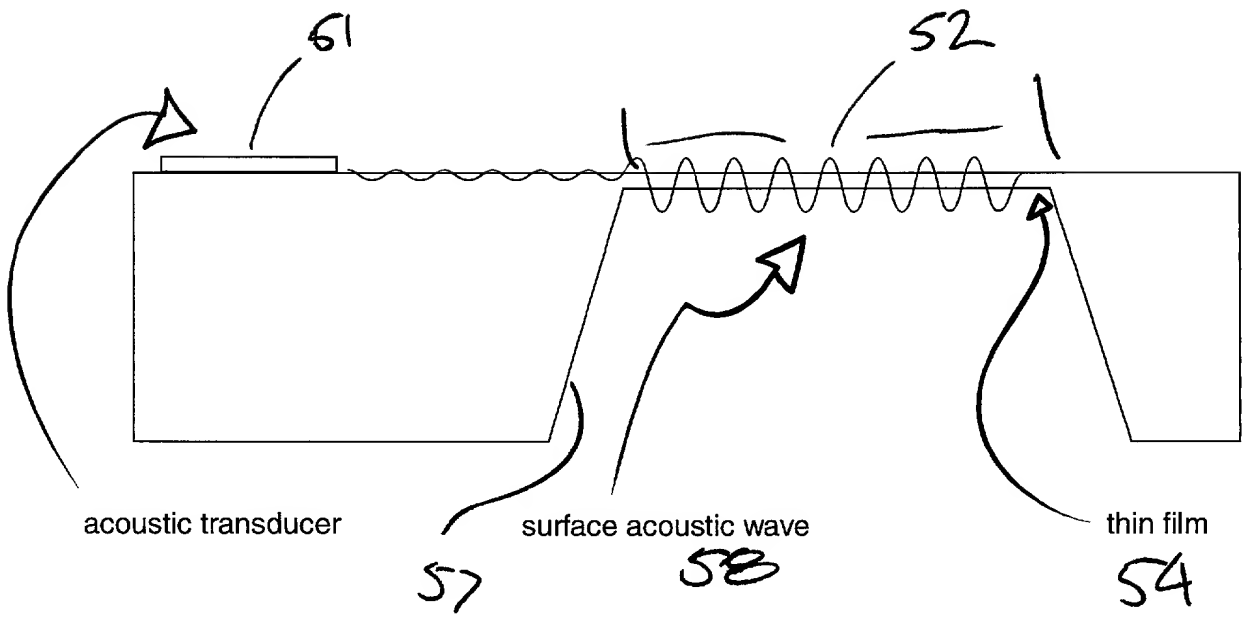


FIG 2

FIG. 3 is a schematic diagram of a device 50, showing an acoustic transducer 61, a surface acoustic wave 52, and a thin film 54. The device 50 is shown in cross-section, with the acoustic transducer 61 on the left, the surface acoustic wave 52 in the center, and the thin film 54 on the right. The surface acoustic wave 52 is represented by a wavy line, and the thin film 54 is represented by a rectangular block. The device 50 is labeled with the number 50.



50

FIG 3

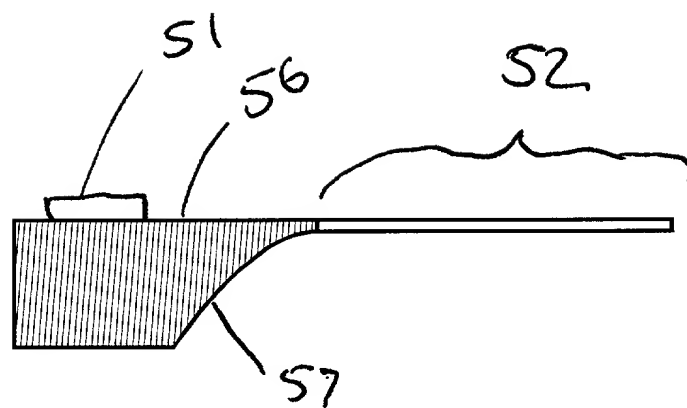


FIG 3b

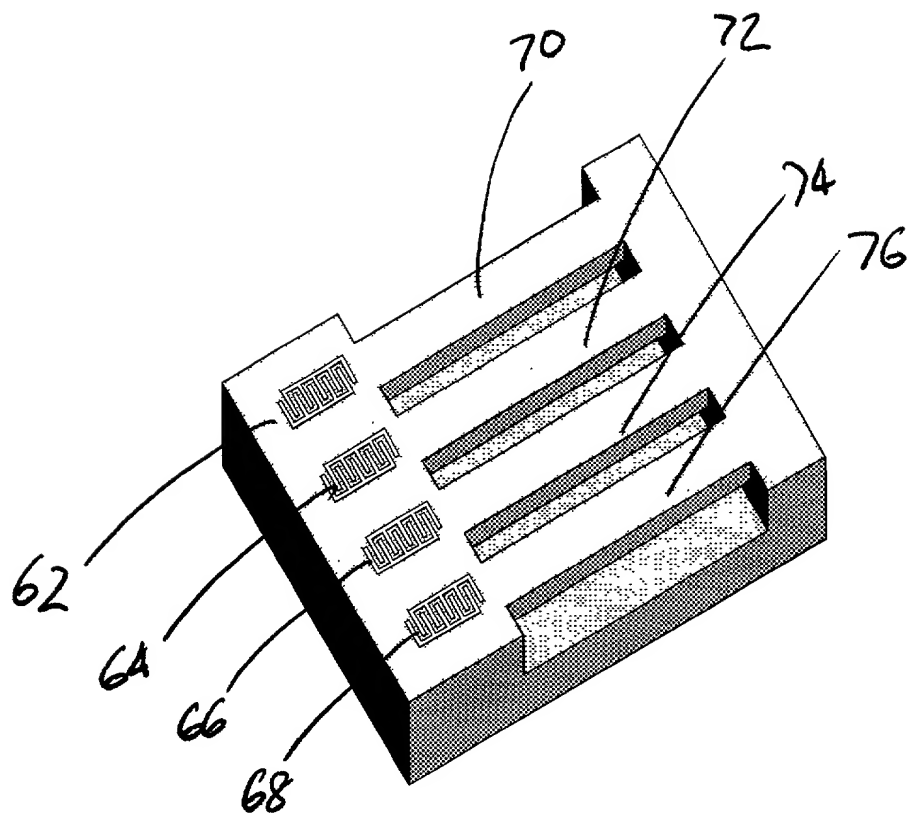


FIG 4a

FIG. 4b is a perspective view of the device 100 showing the top surface 62 and the side surface 64. The device 100 includes a plurality of conductive traces 66 and 68 on the top surface 62. The device 100 also includes a plurality of conductive pads 70 and 72 on the side surface 64. The device 100 further includes a plurality of conductive vias 74 and 76 on the top surface 62. The device 100 is shown in a perspective view, and the labels 62, 64, 66, 68, 70, 72, 74, and 76 are used to identify the various components of the device 100.

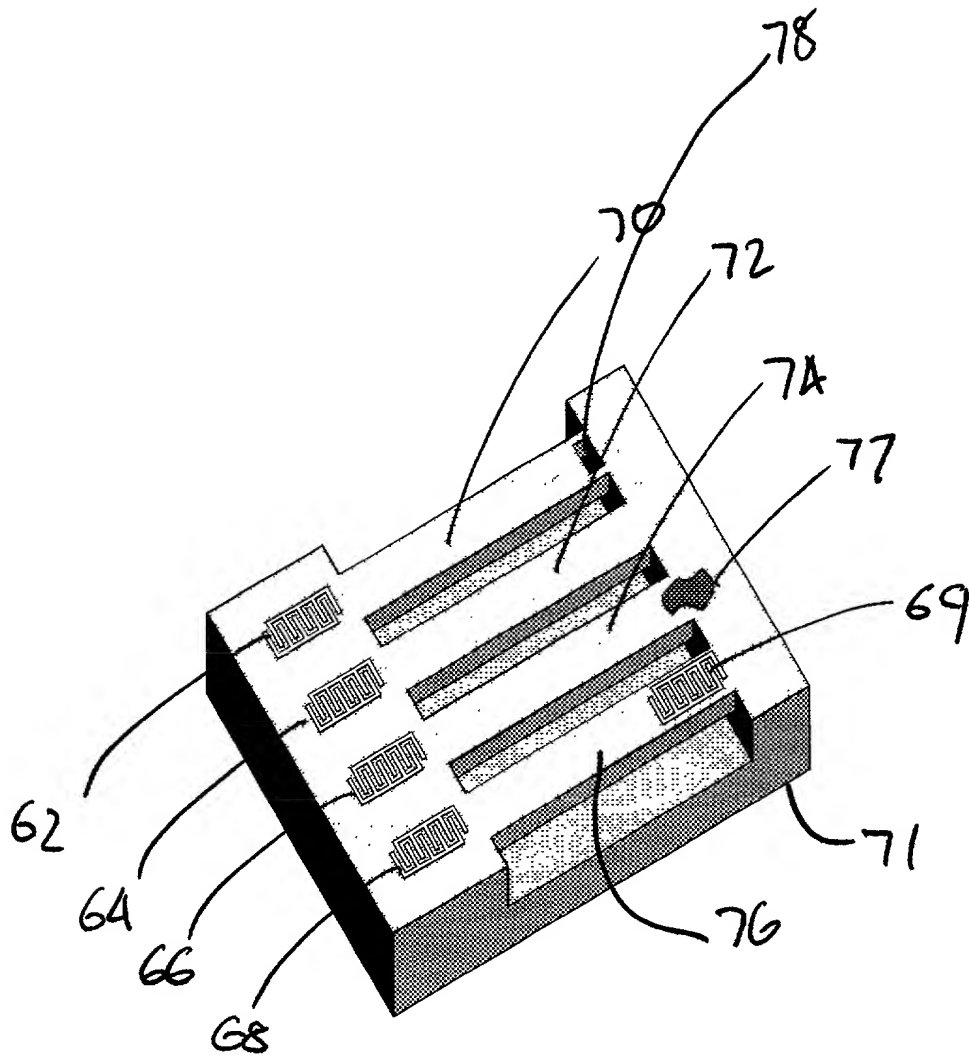


FIG. 4b

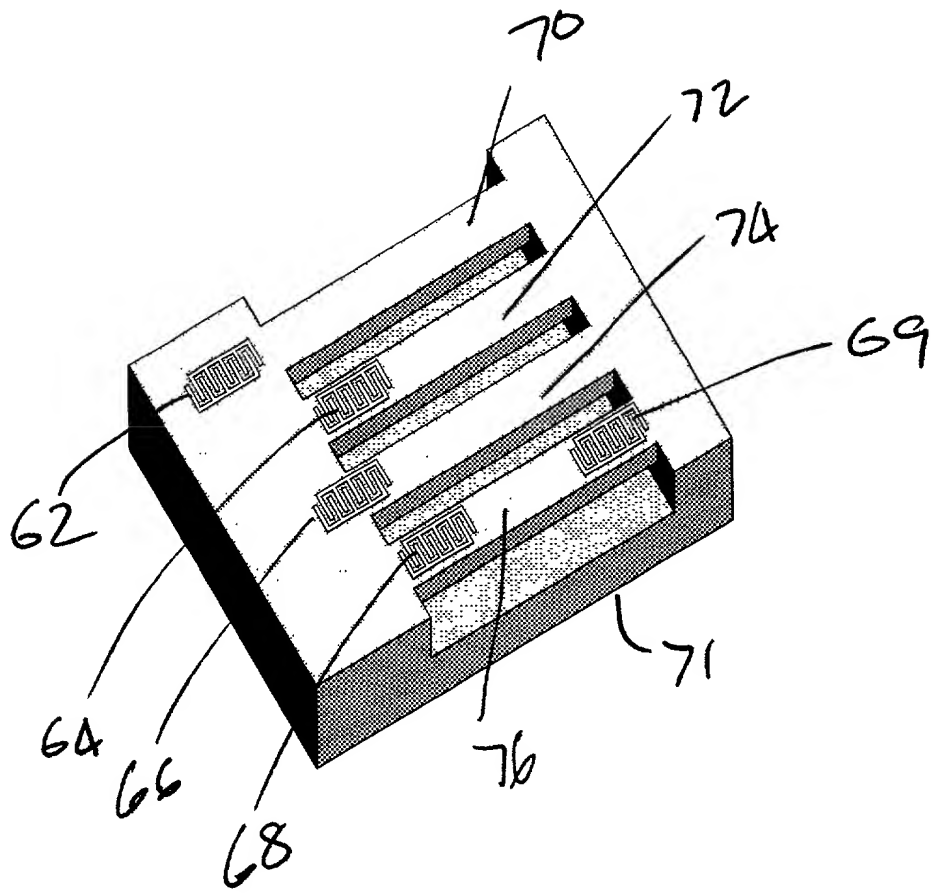


FIG 4C

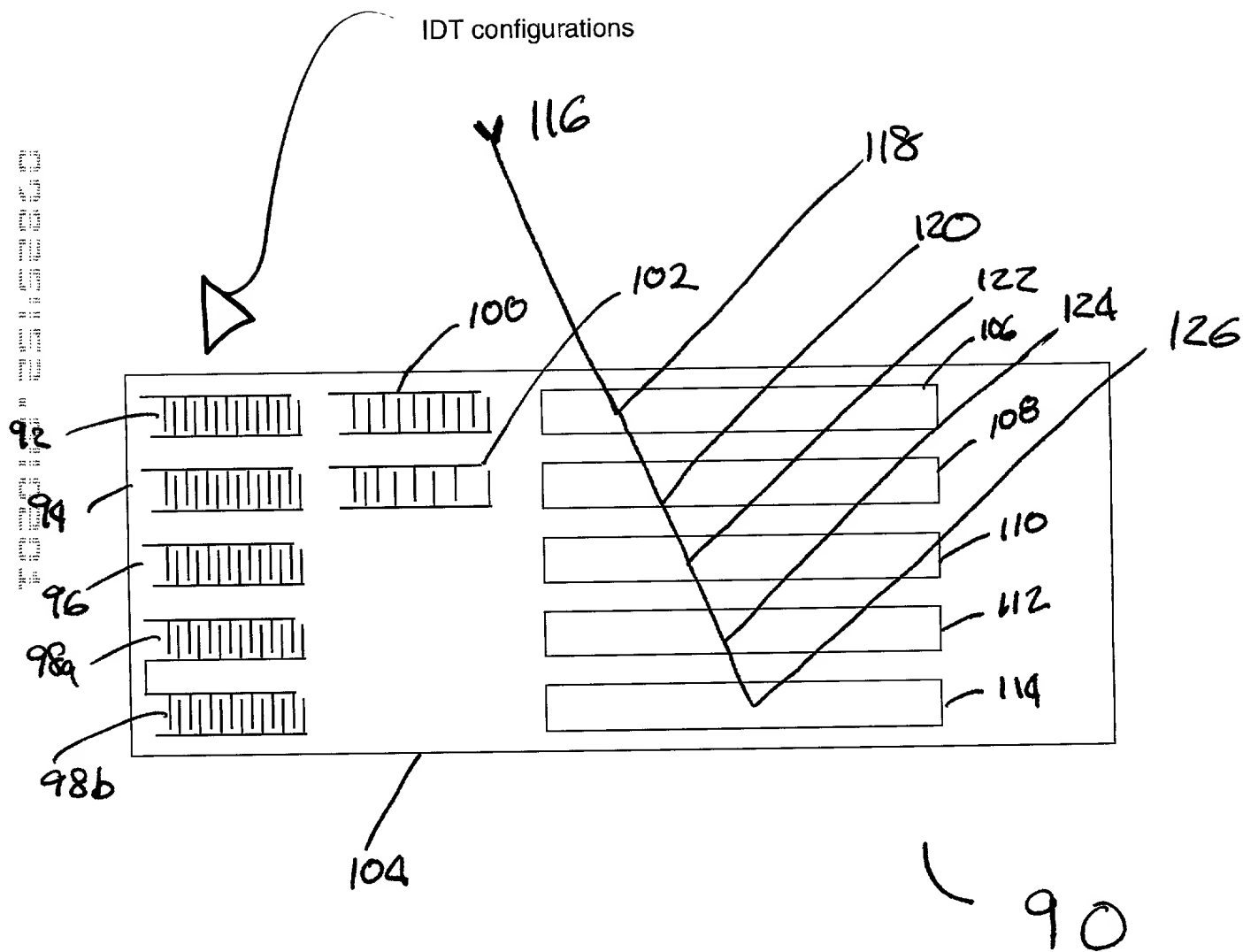


FIG 5a





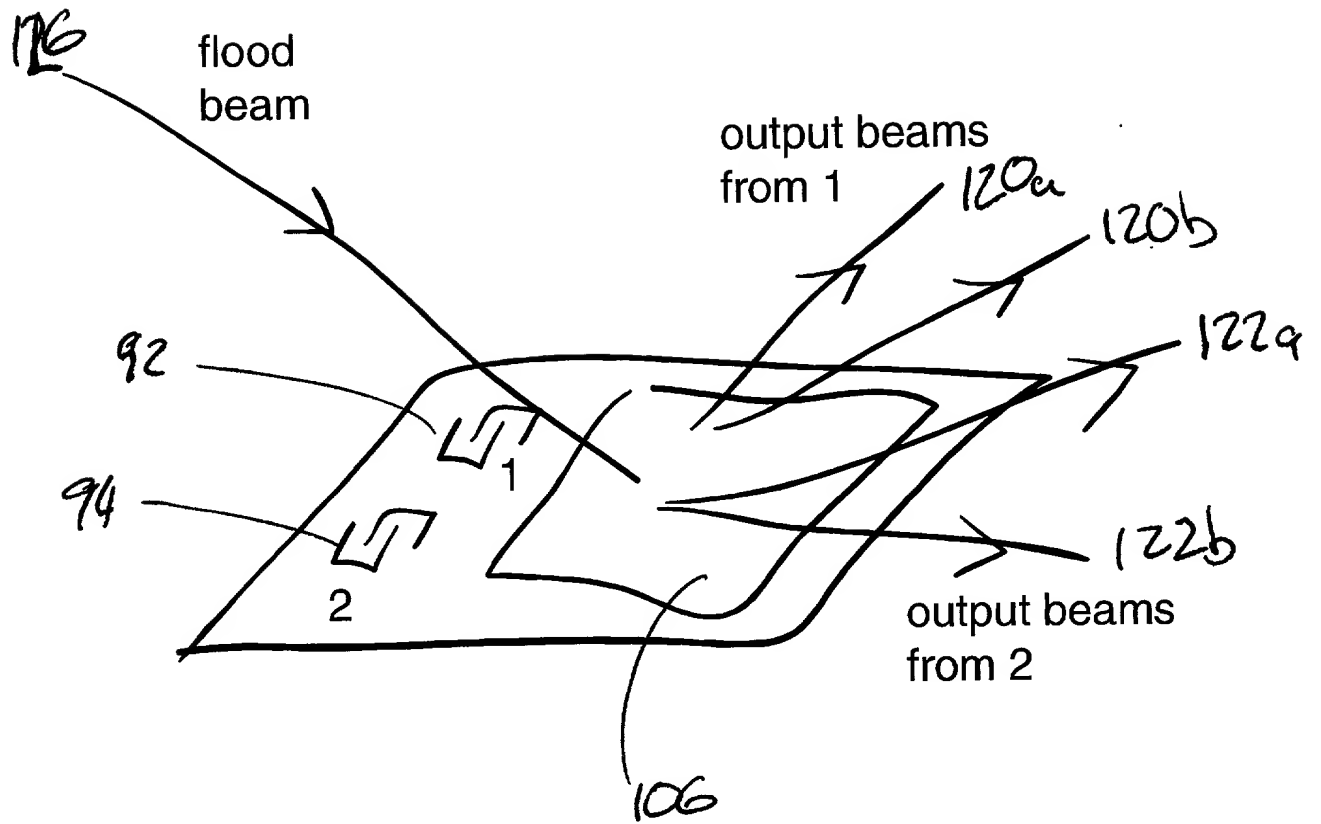


FIG 5C

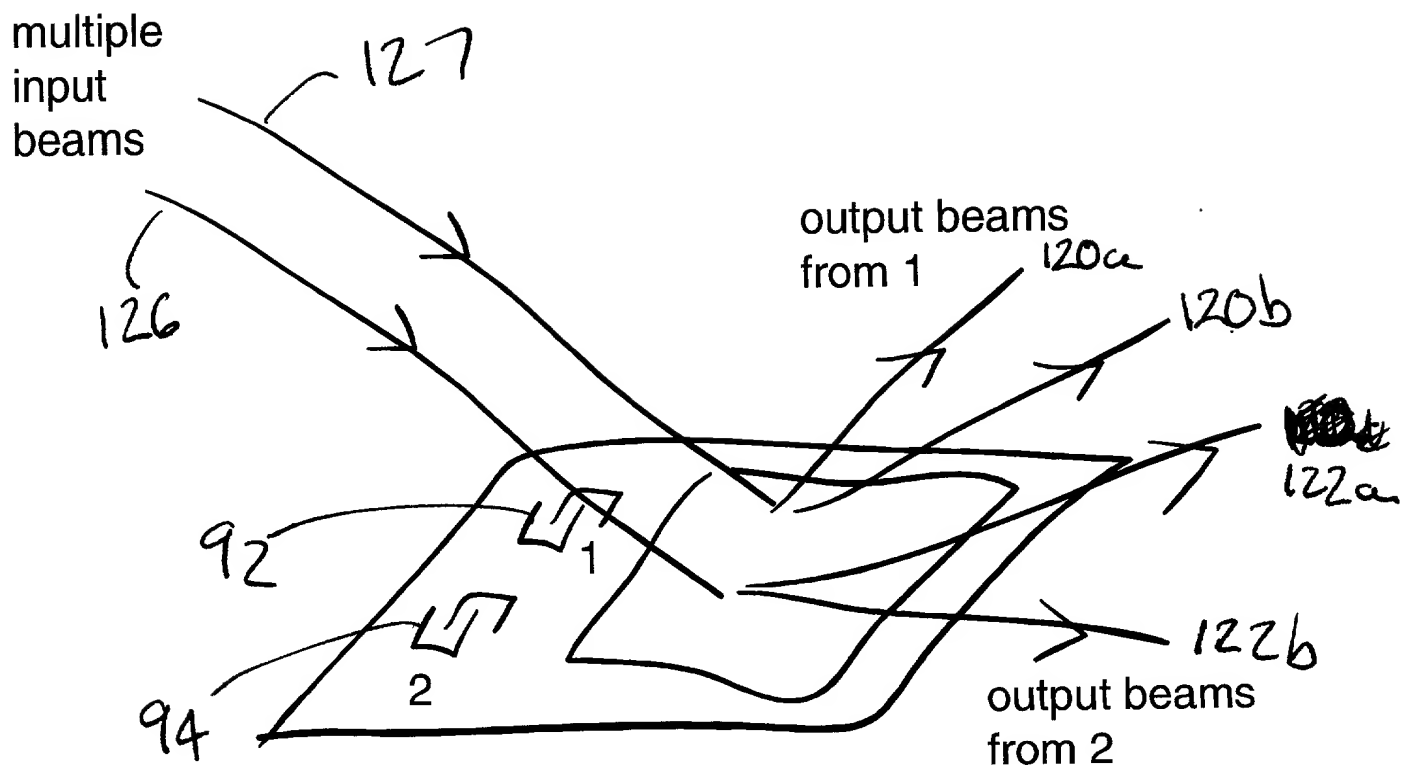


FIG 5d

FIG. 6 is a schematic diagram of a laser system 150. The system includes a laser gain medium 152, a mirror 154, and a SAW SLM 156. The mirror 154 and the SAW SLM 156 are positioned to form an optical cavity with the laser gain medium 152. The SAW SLM 156 is configured to diffract the output beams 160. A dump beam 162 is also shown, which is directed towards the diffracted output beams 160. The system is labeled 150.

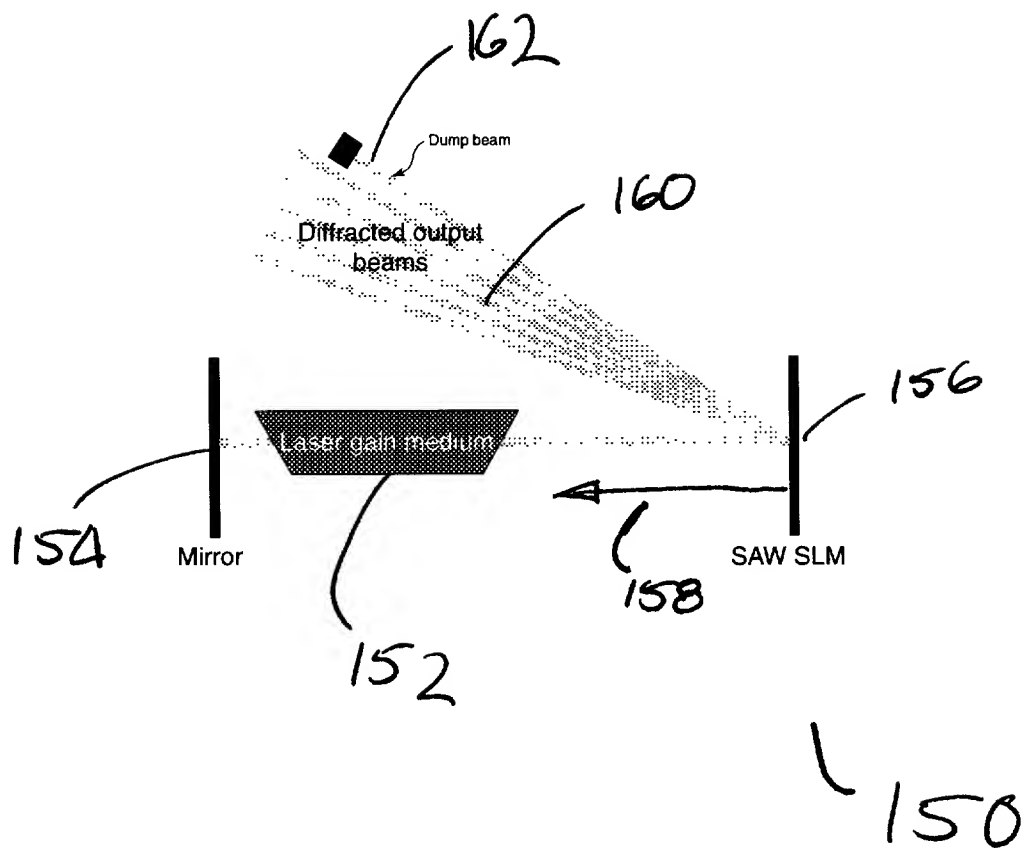


FIG 6

FIG. 7 is a perspective view of a fiber optic switch 170. The switch 170 includes a base 176 and a plurality of source fibers 172a, 172b, 172c. Each source fiber 172a, 172b, 172c is coupled to a collimating lens 174a, 174b, 174c. The collimating lenses 174a, 174b, 174c are positioned above the base 176. The base 176 includes a plurality of receiving fibers 178a, 178b, 178c. The source fibers 172a, 172b, 172c are coupled to the receiving fibers 178a, 178b, 178c via the collimating lenses 174a, 174b, 174c. The switch 170 is configured to route light from the source fibers 172a, 172b, 172c to the receiving fibers 178a, 178b, 178c.

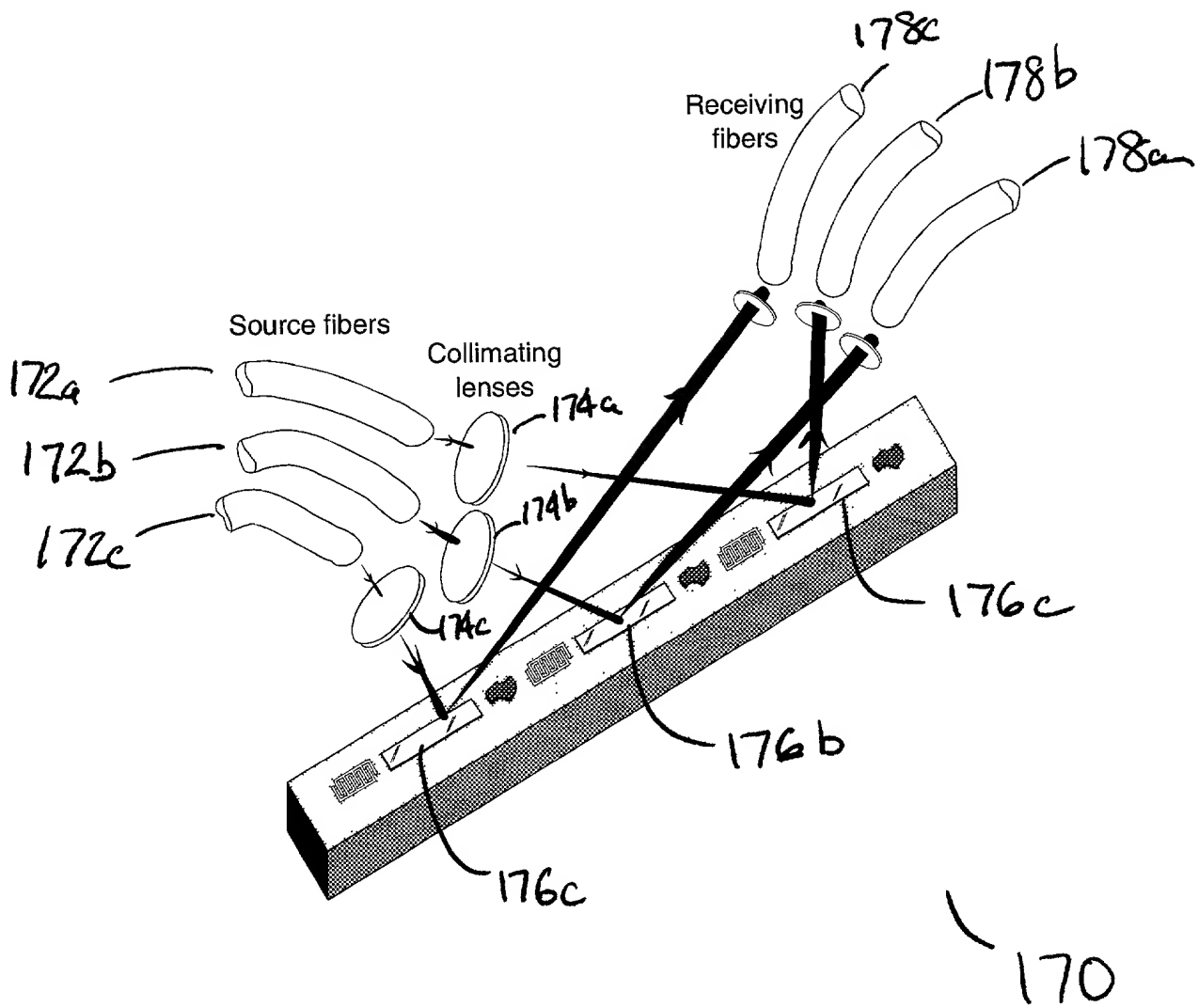
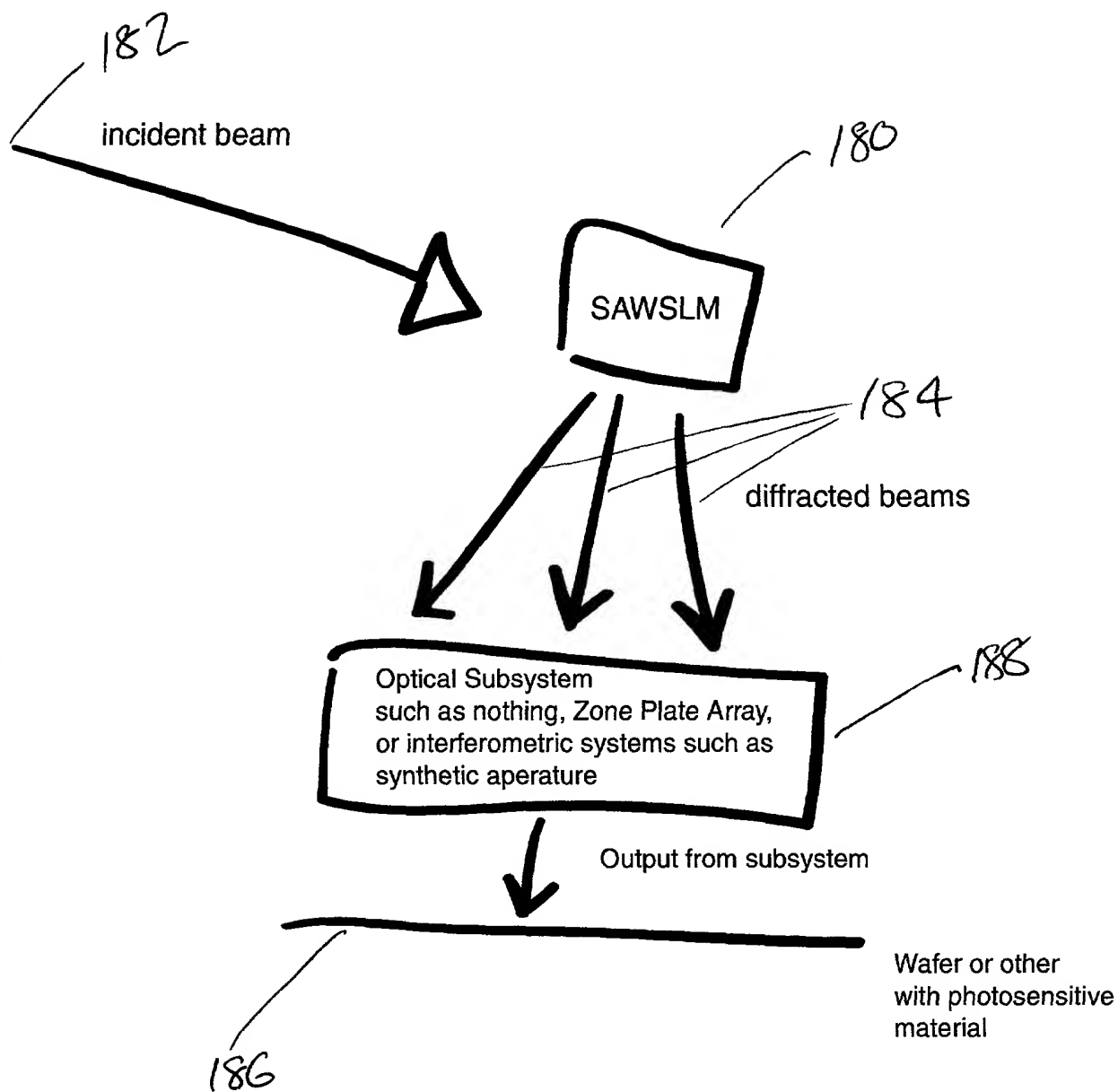


FIG 7

FIG. 8 is a schematic diagram of a SAW SLM as part of a lithographic system. The diagram shows an incident beam 182 entering a SAWSLM 180. The SAWSLM 180 produces diffracted beams 184, which are then directed to an optical subsystem 188. The optical subsystem 188 can be a Zone Plate Array or an interferometric system. The output from the subsystem 188 is directed to a wafer or other photosensitive material 186.



SAW SLM as part of Lithographic System

FIG 8

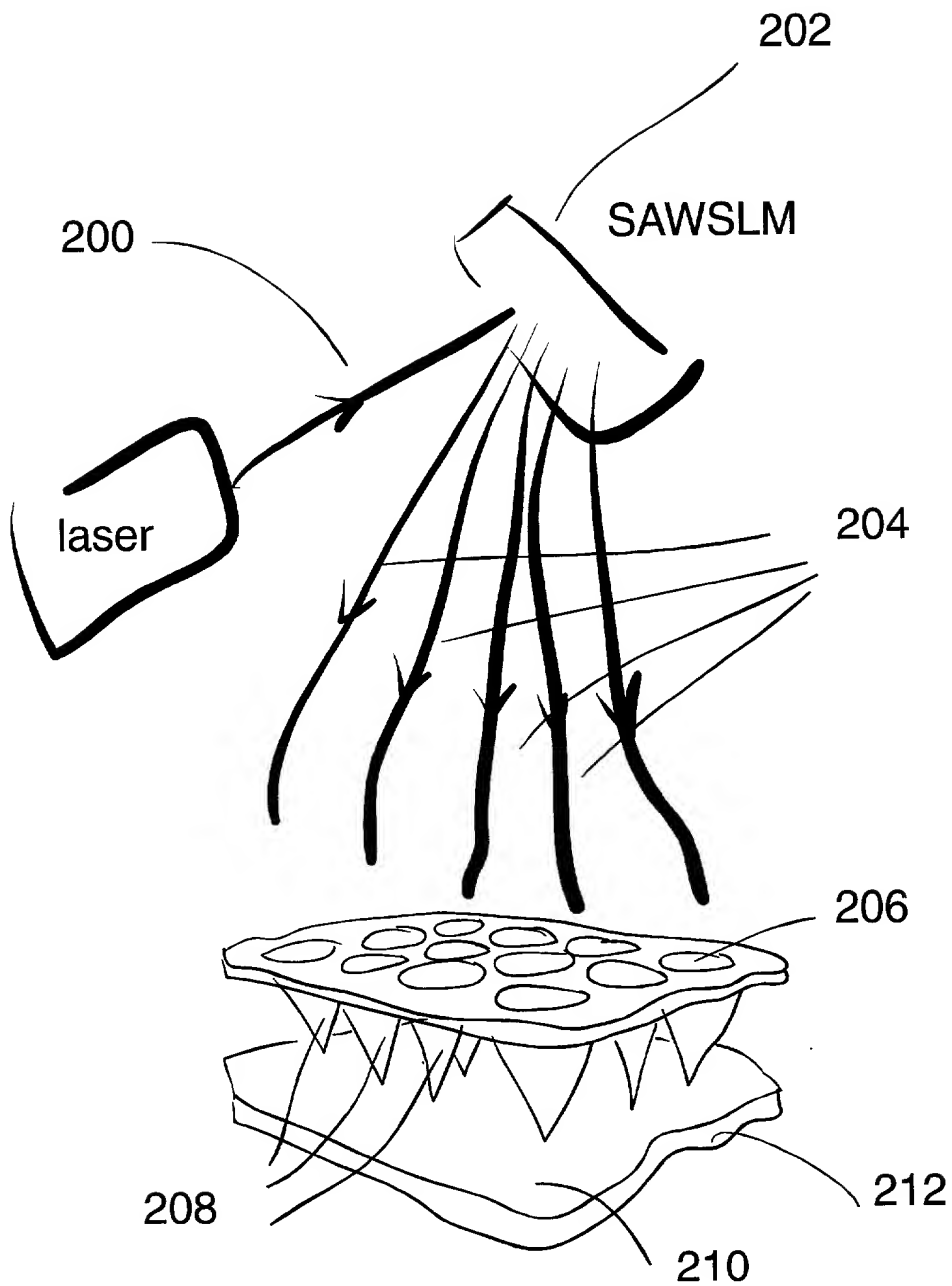


FIG 9

FIG. 10

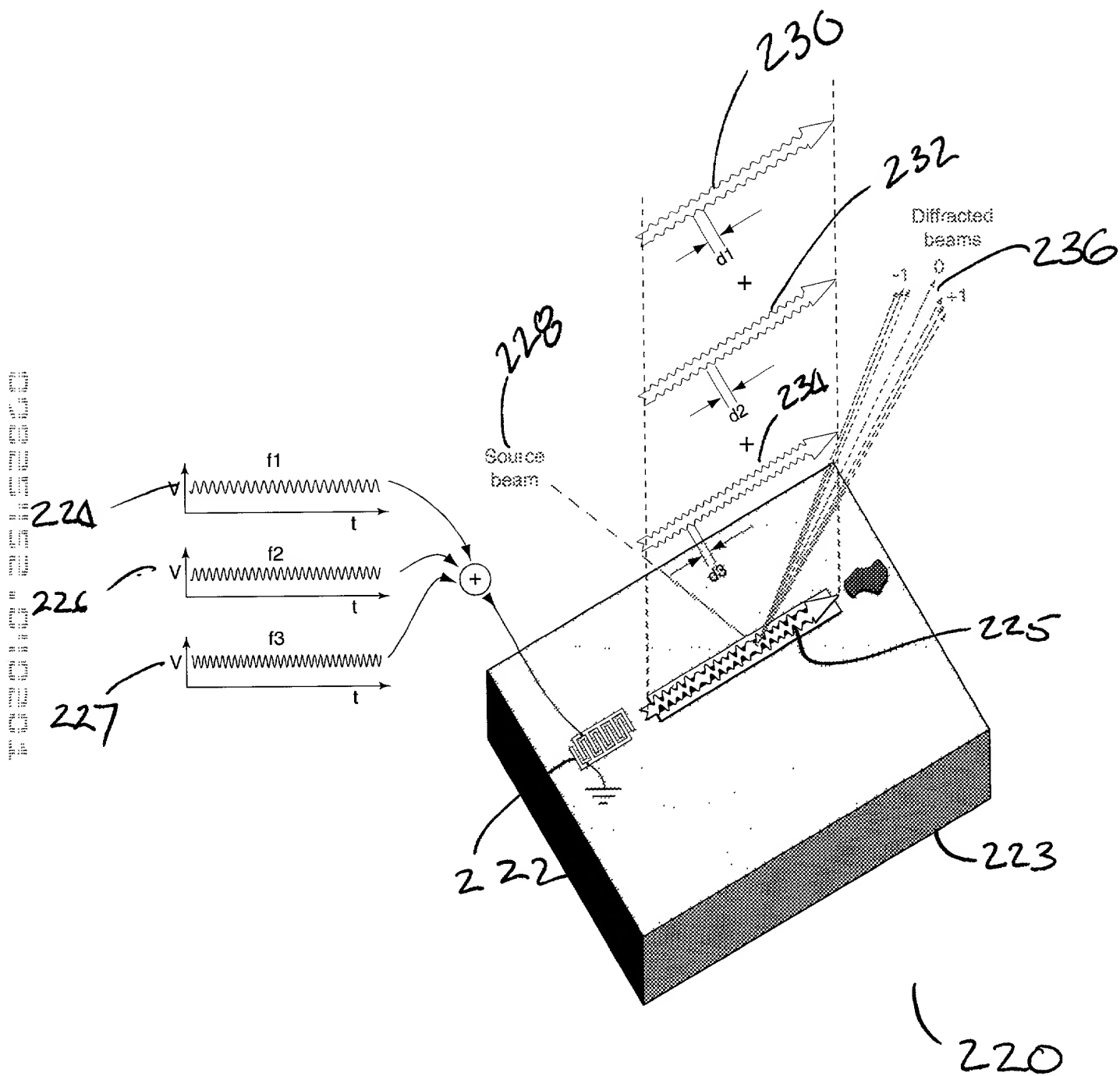


FIG 10



FIG. 11 is a graph showing Drive Frequency versus Time. The graph illustrates a series of vertical bars representing drive frequency over time. The bars are labeled 242, 244, 246, 248, 250, and 252. A central point is labeled 240, and a line connecting the points is labeled 241. The text 'Laser exposure' is written below the graph.

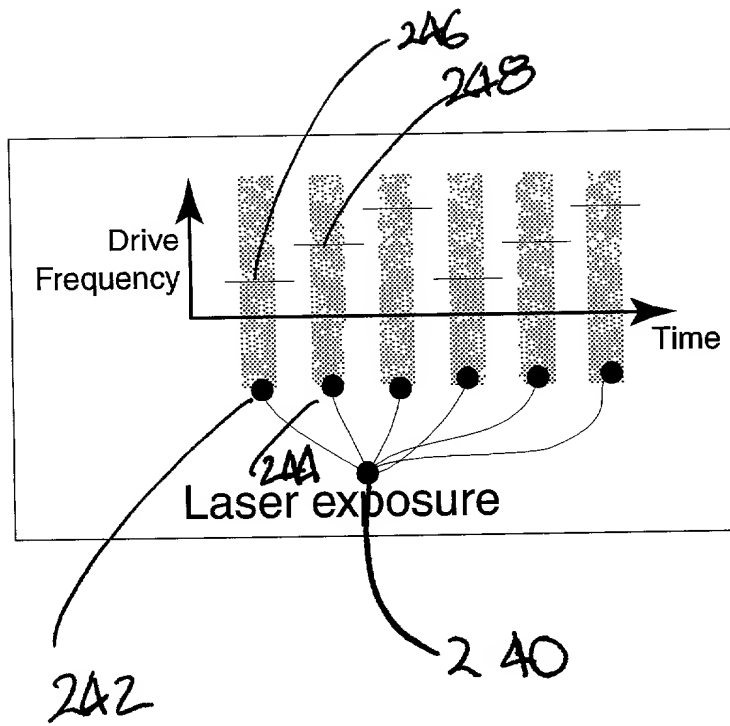


FIG 11

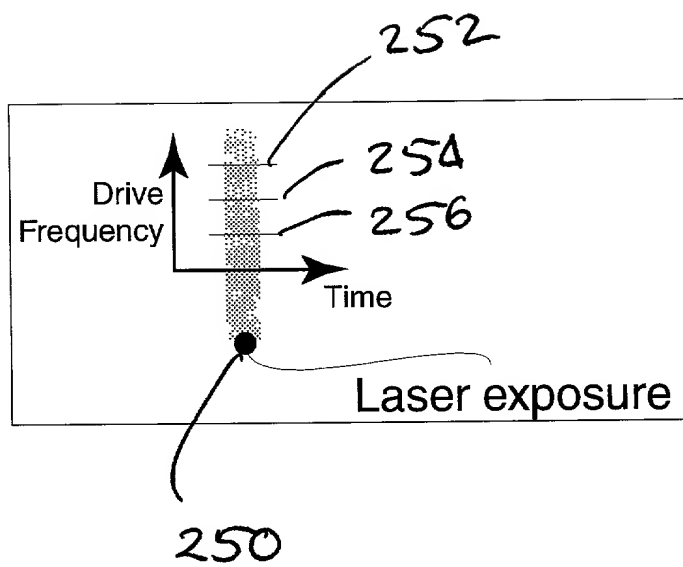
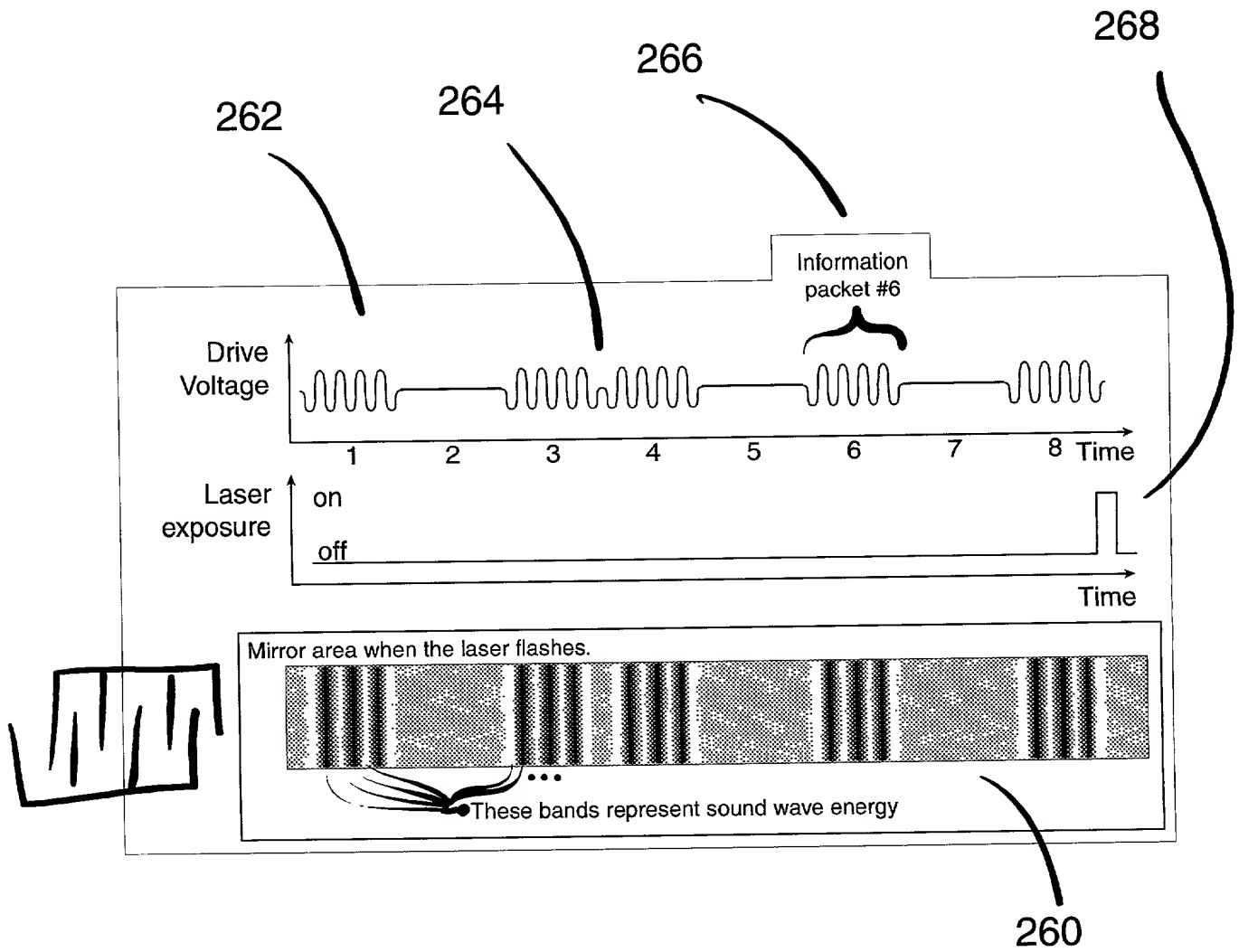
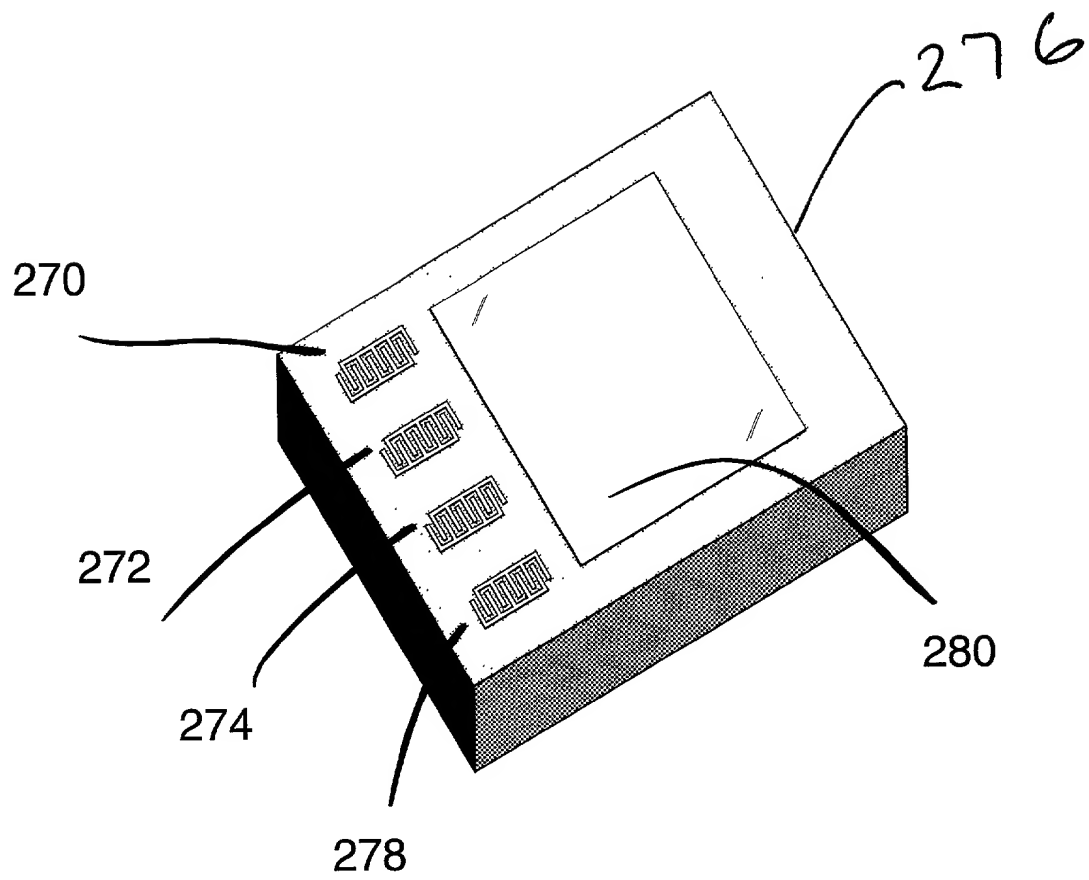


FIG 12

FIG. 13 is a schematic diagram of a system for recording sound wave energy on a mirror surface using a laser. The system includes a drive voltage source (262) connected to a laser (264). The laser is controlled by a drive voltage signal (266) that is modulated with an information packet (268). The laser beam is directed at a mirror surface (260) which is being recorded. The mirror surface shows a series of vertical bands (260) representing sound wave energy. The laser exposure is controlled by a pulse (268) that is synchronized with the information packet.



13



14

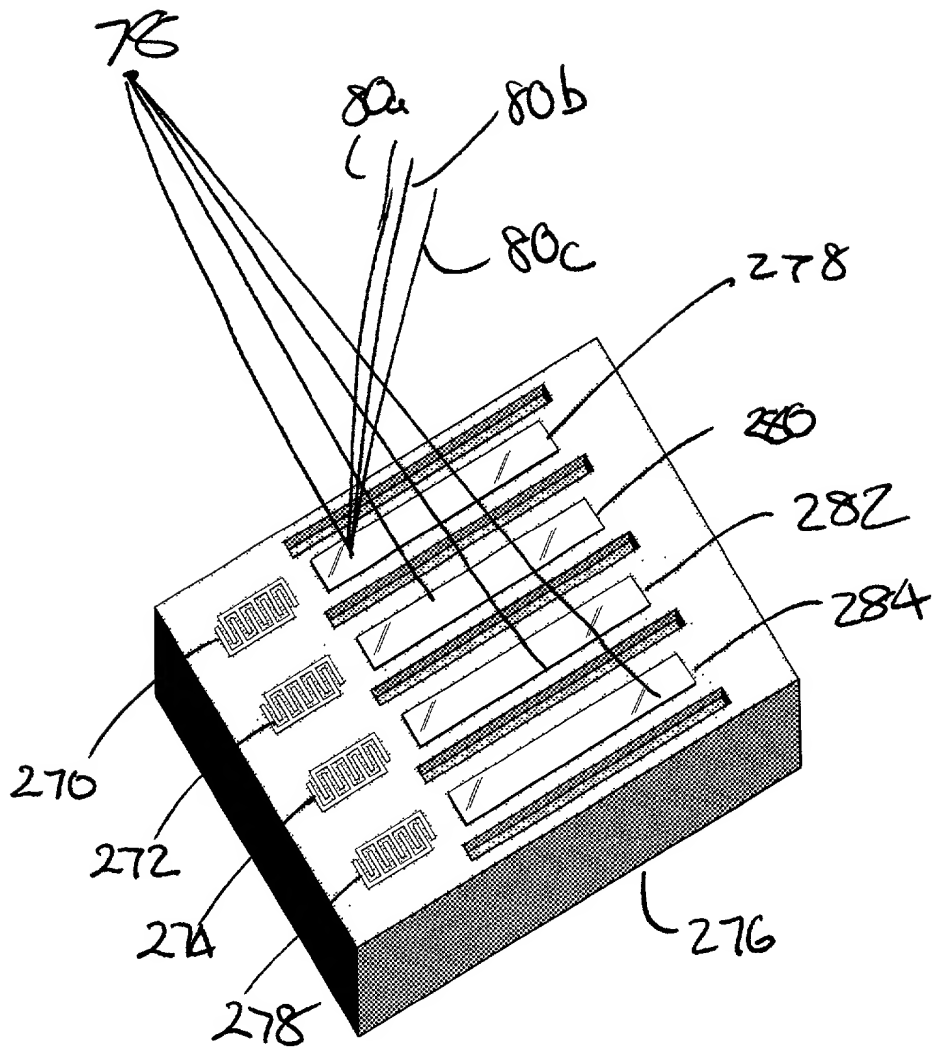


FIG 14b